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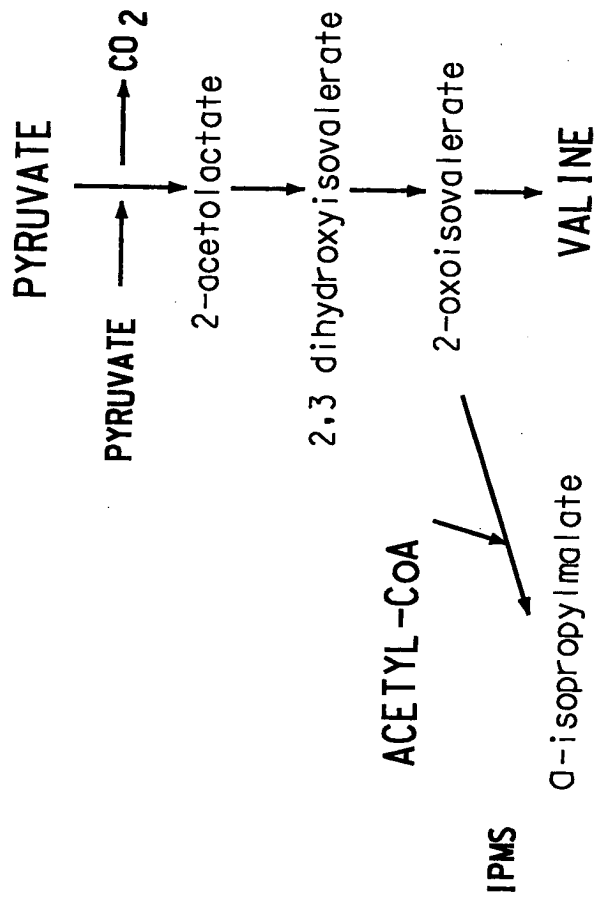
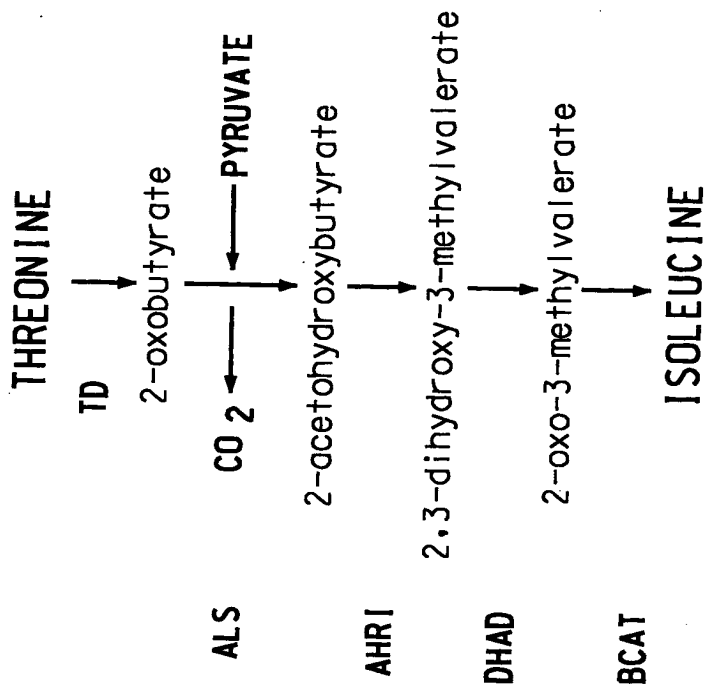


FIG. 1

FIG. 1

FOO22T" 0542200T

SEQ ID NO: 7	M.....GLLTKVATSRQFSTRCAVAK.....	*****	*****	*****	*****
SEQ ID NO: 2	MQSM.....ALTSPLPEVGPVSGRRRLQIRAT....	*****	*****	*****	*****
SEQ ID NO: 4	MQSTLFNPTHSLPTSPHSIRNSGHSLSVRASIAVETPTETVKLNKYSRRITEPKSQG	*****	*****	*****	*****
SEQ ID NO: 6	*****	*****	*****	*****
	1				60
SEQ ID NO: 7	ASQAMLYATGFEKKEDFKKPQGVGSCWWSGNPCNMHLLDLNNRCSQSIEKAGLKAMQFNT	*****	*****	*****	*****
SEQ ID NO: 2	ASQAVLYGVGLTDADLRKPQGVSSVWYEGTNCNMHLLRLAEAVRDGVREAGMVGFRENT	*****	*****	*****	*****
SEQ ID NO: 4	ASQAVLYGVGLSEDDMAKPQGVSSVWYEGTNCNMHLLHLSEAVRDGVAAAGMVPFRENT	*****	*****	*****	*****
SEQ ID NO: 6	*****	*****	*****	*****
	61				120
SEQ ID NO: 7	IGVSDGISMGTKGMRYSLSQSRDIADSFETIMMAQHYDANIAIPSCDKNMPGVMMAMGRH	*****	*****	*****	*****
SEQ ID NO: 2	VGVSDAISMGTRGMCYLSQSRDLIADSIETVMAQHYDANISIPGCCDKNMPGTIMAMGRL	*****	*****	*****	*****
SEQ ID NO: 4	VGVSDAISMGTRGMCYLSQSRDLIADSIETVMAAQWYDGNISIPGCCDKNMPGTIIAMGRL	*****	*****	*****	*****
SEQ ID NO: 6	*****	*****	*****	*****
	121				180
SEQ ID NO: 7	NRPSIMVYGGTILPGHPTCGSSKISKINIDIVSAFQSYGEYISKQFTEEREDVVEHACPG	*****	*****	*****	*****
SEQ ID NO: 2	NRPSIMYGGTIKPGHFQ.....GNSYDIVSAFQCYGEYVSGSITDEQRKNVLRNSCPG	*****	*****	*****	*****
SEQ ID NO: 4	NRPSIMVYGGTIKPGHFE.....GNTFDIVSAFQCYGEYVSGSINDDQQRNVIRNSCPG	*****	*****	*****	*****
SEQ ID NO: 6	*****	*****	*****	*****
	181				240

FIG. 2A

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FOO22T" 0542200T

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SEQ ID NO: 7  PGSCGMYTANTMASAAEVLGLTIPNSSSFPAVSKEKLAECDNIGEYIKKTMELGILPRD
SEQ ID NO: 2  AGACGMYTANTMASAIEITLGMSLPYSSSTPAEDPLKLEECRLAGKYILLELLKMDLKPKD
SEQ ID NO: 4  AGACGMYTANTMASAIEAMGMSLPYSSSTPAEDPLKLEECRLAGKYILLELLKMDLKPRD
SEQ ID NO: 6  .....
                241
                300

SEQ ID NO: 7  ILTKEAFENAIITYVVATGGSTNAVLHLVAVAHSAAGVKSPLSPDDFQRIISDTPPLIGDFKPSG
SEQ ID NO: 2  IITEKSLRNAMVIVMALGGSTNAVLHLIAIARSVGLHLTLDDFQKVSDDQVPFLADLKPSG
SEQ ID NO: 4  IITRSLRNAMVIVMALGGSTNAVLHLIAIAKSVGIDLTLDLFQKVSDEVPIADLKPSG
SEQ ID NO: 6  .....
                301
                360

SEQ ID NO: 7  KYVMADLINVGGTQSVIKYLYENNMHLGNTMTVTGDTLAERAKKAPSLPEGQEIHKPLSH
SEQ ID NO: 2  KYVMEDLHKIGGTPAVIHYLEQGLLDGDCMTVTGKTLAENAKIFPPLSEGQOIIRPLDN
SEQ ID NO: 4  KYVMEDVHKIGGTPAVIRYLLEQGFLDGDCMTVTGKTLAENAEELVPPLSNGQEIIRPVEN
SEQ ID NO: 6  .....
                361
                420
```

FIG. 2B

RECEIVED

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++- * +*+++++*+++++ +*+*+++++*+++++*+++++*+++++*+++++*+++++*+++++
SEQ ID NO: 7      PIKANGHLQILYGSLAPGGAVGKITGKEGTYFKGRARVFEEEGAFIEALERGEIKKGEKT
SEQ ID NO: 2      PIKPTGHIQILYGNLAPEGSAKITGKEGLFFSGPALVFEGEESMITAISENPANFKGK.
SEQ ID NO: 4      PIKKTAAHIQILYGNLAPQGSVAKITGKEGLYFSGPALVFEGEEAMIAAISEDPSSEFKGK.
SEQ ID NO: 6      .....APEGSAKITGKEGLFFSGPALVFDEGEESMITAISENPANFKGK.

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[illegible][illegible]

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+   +++* *
SEQ ID NO: 7   SNGCVLDA
SEQ ID NO: 2   SRGCVTDE
SEQ ID NO: 4   SSGCVTDE
SEQ ID NO: 6   ....TLE
601             608

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FIG. 2C

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TC022T" 0542200T

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+
SEQ ID NO:20 MTKQTIRVEL.....
SEQ ID NO:09 MEYGAVLAAPLVARPNWLLSPPL..APSIQIONRLYSISSEPLK.....AGPVRA
SEQ ID NO:11 .....
SEQ ID NO:13 .....
SEQ ID NO:15 .....
SEQ ID NO:17 MESIRLIYPICPSRHSSFLLSHQSPFELCEPSLSKLKLR...KQFPLTSQNVLEAASPLRP
SEQ ID NO:19 MT...ASYNTE.....
1
60

```

```

* * * * *
SEQ ID NO:20 .....TSTKKPKPDNPQLSFGRVFTDHFVMDYAADKGWYDPRRIIPYQPLSMDPT
SEQ ID NO:09 CRALASN.YTQTSETVLDWENLGFIVQTDYMYIAKCTDGNFSEGEVMPFGPIALSPS
SEQ ID NO:11 .....
SEQ ID NO:13 .....
SEQ ID NO:15 .....HEGILSR.....YGNIELSPS
SEQ ID NO:17 SATLSSDPYSETIELADIEWDNLGFGLQPTDYMIMKCTRGTFESKGELQRFGNIELNPS
SEQ ID NO:19 .....GTPDLVDFDWETLGFQLVPTDFMYIMKCSSDGVFTKGELVPYGPIELNPA
61
120

```

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+ *++** + + + * * * * *
SEQ ID NO:20 AMVYHYGQTVFEGLKAY..VSEDDHVLIFRPEKNMERLNQSNDRLCIPQIDEEQVLEGLK
SEQ ID NO:09 SGVLNYGQGLFEGLKAYK..KTDGSILLFRPEENAERMRTGAERM.....
SEQ ID NO:11 .....
SEQ ID NO:13 .....
SEQ ID NO:15 SGVINYGQGLFEGLKAYRAANQQGSYMLFRPEENARRMQHGAERMCMPSVEQFVHAVK
SEQ ID NO:17 AGVLNYGQGLFEGLKAYR..KQDGSILLFRPEENGLRMQIGAERMCMPSPTMEQFVEAVK
SEQ ID NO:19 AAVLNYGQGLLEGLRAHR..KEDGSVVFRPKENALRMRIGADRILCMAPSVEQFELSAVK
121
180

```

FIG. 3A

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TABLE 1

SEQ ID NO: 20	Q L V A I D K D W I P N A E G T S L Y I R P F I I A T E P F L G V A A S H T Y K L L I L S P V G S Y Y K E G I K P V K
SEQ ID NO: 09
SEQ ID NO: 11 S S F F F F F V S P V G N Y F K E G L S P I N
SEQ ID NO: 13
SEQ ID NO: 15	Q T V L A N R W V P P Q G K A L Y I R P L L I G S P I L G L A P A P E Y T F L I Y A A P V G T Y F K E G L A P I N
SEQ ID NO: 17	D T V L A N K R W V P P A G K G S L Y I R P L L M G S G P V L G V A P A P E Y T F L I Y V S P V G N Y F K E G L A P I N
SEQ ID NO: 19	H T I L A N K R W V P P T G K G S L Y I R P L L I G S G A M L G V A P A P E Y T F V V Y V C P V G H Y F K D G L S P I S

181 240

SEQ ID NO: 20	I A V E S E F V R A V K G G T G N A K T A G N Y A S S L K A Q Q V A E E K G F S Q V L W L D G I E K Y I E E V G S M N
SEQ ID NO: 09
SEQ ID NO: 11	L I V E D K F H R A S P G G T G G V K T I G N Y A S V L K A Q K I A K G K G Y S D V L Y L D A V H D K Y L E E V S S C N
SEQ ID NO: 13
SEQ ID NO: 15	L V V E D S I H R A M P G G T G G V K T I T N Y A P V L K A Q M D A K S I G F T D V L Y L D A V H K T Y L E E A S S C N
SEQ ID NO: 17	L I V E N E F H R A T P G G T G A
SEQ ID NO: 19	L L T E E E Y H R A A P G G T G D I K T I G N Y A S V S A Q R R A K E K G H S D V L Y L D P V H K K F V E E V S S C N

241 300

SEQ ID NO: 20	I F F K I N G E I V T P M L N G S I L E G I T R N S V I A L L K H W G L Q V S E R K I A I D E V I Q A H K D G I L E E A
SEQ ID NO: 09
SEQ ID NO: 11	I F V V K D N V I S T P A I K G T I L P G I T R K S I I E V A Q S K G F K V E E R L Y C V D E L I N A
SEQ ID NO: 13	.. V V K G G V A T P D T R G T I L P G I T R K S V I E L A R D R G Y K V E E R L Y S I D D L Y A A

FIG. 3B

FIG. 4A

Foot "054200F"

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SEQ ID NO:29 EGTGDN I . FIVKNGVLKTPPVYQ I LK G I T R D V V I K L A K E E G I E V V E E P L T L H D L Y T . . . *
SEQ ID NO:22 EGPMVNVA FVTAAGELVLP A . FDKILAGCTAKRLLALAPRLVESGLLKAVTTRHIAADEA *
SEQ ID NO:24 EGPNNMVA FVTQDKELIMPH . FDKILSGCTAKRVLTLAESLLREGKLGIRVKTVTVEEG *
SEQ ID NO:26 EGPNNMVA FITQDKELVMP P . FDNILHGCTAKRLLLELAPKLVDQGLLKG VATKKLTVEEA *
SEQ ID NO:28 EGSNNMNVGFVTKNKE LLMP R . FDKILSGCTARRVLT LAEHLVAHGKLSRVISRNVSVEEG 240
181

SEQ ID NO:29 ...ADELFITGTAAEIVPVFEIDGRVINNKQVGEITKKLKEKFKDIR.....TKWGIKIVY *
SEQ ID NO:22 KRCSAEMAFVGSGLPVLPIVEWDDQLIGDGKVGKTMALSDLLWEDMKSGP..DRIAPVY *
SEQ ID NO:24 KQ.ADEMMLLGSGLVCPVVQWDEQVIGDGKEGPI TQALLNLIVEDMKSGPSTVRIPVY *
SEQ ID NO:26 KA.AAEMMYVGSTLPLLP I I V W D D Q P I G N G R V G E L T M L L S D M L W D D M V A G P G T Q R I P V Y *
SEQ ID NO:28 KM.ADEMMLIGSGILVKPVVQWDDKIIGSGQEGPIAQA..... 300
241

SEQ ID NO:29 .DE
SEQ ID NO:22 .K.
SEQ ID NO:24 ...
SEQ ID NO:26 VE.
SEQ ID NO:28 ...
301 303

FIG. 4B

APPROVED	O.G. FIG.	
BY	CLASS	SUB
DRAFTSMAN		

Pocket No: 88-1126
 Title: Plant Branched Chain Amino Acid Biosynthetic Enzymes
 Inventor: Savitsky, Carl Falco
 Appl. No.: 09/000000
 E.I. DuPont de Nemours & Co.

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100221" 05422007

SEQ ID NO: 34MTTKKADYIWENGEMVRWEDAKVHVMSHALHYGTSVFEGIRCYDSHKGPV
 SEQ ID NO: 31 QPPLSDPPLPVPAKNILVWVGDELLPRNSAKVSVFDSVVQGGDAVWEGLRIDYDGK....
 SEQ ID NO: 33A.....R.....
 1 60

SEQ ID NO: 34 VFRHREHMQRLLHDSAKIYRFPVSQSIDELMEAC.RDVIRKNNLTSAIYR.PLIFVGDVGM
 SEQ ID NO: 31 VFKLDEHLDRLLFDSAKAMAFSNVPTRDWIKDAIFKTLIANGMFENNAHRLTLTRGKKVTS
 SEQ ID NO: 33 V.KLEEHLDRLLFDSKAMAFSNVPSRDWIKDAIFKTLNANGMFENNAHRLTLTRGKKVTS
 61 120

SEQ ID NO: 34 GVNPPAG.YSTDVILIAAFPWGAYLGAEALQEGIDAMVSSWNRAAPNTIPTAAKAGGNLYS
 SEQ ID NO: 31 GMSPAFNLYGCALIVLA.EWKPPVYDNS..HGIKLVTAATTRNSPNSIDPKIHNN.NLIN
 SEQ ID NO: 33 GMSPTFNLYGCVLIVLA.EWKPPVYDNS..HGIKLVTAATTRNSPNSVDSKIHNN.NLIN
 121 180

SEQ ID NO: 34 SLLVGSEARRHGYQEGIALDVNGYISEGAGENLFEVKDGVLFPTPFTSSALPGITRDAII
 SEQ ID NO: 31 NILAKIEGNLAQAEDAIMLDKDGFSVSETNATNIFMVKKGIVLTPH.ADYCLPGITRATVM
 SEQ ID NO: 33 NILAKIEGNLAQAEDAIMLDQDGFVSETNATNIFMVKKGIVLTPH.ADYCLPGITRATVK
 181 240

FIG. 5A

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FIG. 5B

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*****
SEQ ID NO: 34 KLAKELGIEVREQVLSRESLYLADEVFMSGTAAEITPVRSDGIVGEGRCGPVTKRIQQ
SEQ ID NO: 31 DLVVKENFVLHERRISLSEFHADEVWTTGTMGGEITPVVMIDGREIGDGKIGPVTRQIQK
SEQ ID NO: 33 DLVVKENLVLHERRISLSEFHADEVWTTGTMGGEITPVVMIDGREIGDGKIGLVTRQIQS
                241
*****

*** +***+ ** ** **
SEQ ID NO: 34 AFFGLFTGETEDKKGWLDQVNO
SEQ ID NO: 31 AYKILTAGQGVPIG..VAEV.
SEQ ID NO: 33 AYKVLTAGLGVTIPR..NAEA.
                301
                322
  
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FIG. 5B

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+ + ++++++ * * * * * ++++++ * * * * * ++++++
SEQ ID NO: 45   MGMTIVEKILAKASGKKEVSPGDIVMANIDVAMVHDITGLTVNTLK.EYIE.KVWNPE
SEQ ID NO: 36   .....AREPGENVVDIDVLMTDVDVCGPTIGIFKKFEGEDAKVWDRE
SEQ ID NO: 38   MTMT..EKILARASERAALPGENVWVDVDLMTDVDVCGPGAFDIFKKFEGEDARVWDRE
SEQ ID NO: 40   .....
SEQ ID NO: 42   .....
SEQ ID NO: 44   .....
1

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SEQ ID NO: 45	KIVILFDHQVPADSIKAAENHILMRKEVKEQGIKYFYDIRE.....GVCHQVLFP
SEQ ID NO: 36	KVVIIPDHYIFTSDERANRNVDIRDFCLEQNIKYFYDIKDLSDFRANPDYKGVCCHIALA
SEQ ID NO: 38	KLVIIPDHYIFTSDGRAKRNVDIRDFCAEQNIKYFYDIKDLSDFRANPDYKGVCCHIALA
SEQ ID NO: 40VCHVALA
SEQ ID NO: 42
SEQ ID NO: 44

61-

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** + **++**++**++**++**++**++**++**++**++**++**++**++**++**++**++**++**++**++**++**++**++**+
SEQ ID NO: 45 EKGHVAPGEVVVGADSHCTCHGAFAAFATGIGTGMHVFATGKLWFKVPETIYFNITGD ***
SEQ ID NO: 36 QEGHCRPGEVLLGTDSHTCNAGAFQGFATGIGNTDAGEFVMGTGKALLKVPTIRFVL DGE
SEQ ID NO: 38 QEAHCRPGEVLLGTDSHTCNAGAFQGFATGIGNTDAGEFLVTGKALLKVPTIRFI LDGE
SEQ ID NO: 40 QEGHCRPGEVLLGTDSHTCNAGAFQGFATGIGNTDAGEFVMGTGKALLKVPTIRFVL DGE
SEQ ID NO: 42 .....
SEQ ID NO: 44 .....

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FIG. 6A

10070 The Bell

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.r.r.+++++*****++**+++++*+++++*+++++*+++++
SSEQ ID NO: 45 LQPVVTSKDVILSIIGEVDGATYKACQFGGETVKKMSIASRMTMTNMAIEMGGKTGII
SSEQ ID NO: 36 MPPYLLAKDLILQIIGEISVSGATYKSMFEFVGSTVESLTMEERMTLCNMVVEAGGKNGVV
SSEQ ID NO: 38 MPPYLLAKDLILQIIGEISVSGATYKSMFEFVGSTVESLTMEERMTLCNMVIEAGGKNGVV
SSEQ ID NO: 40 MPPYLLAKDLILQIIGEISVSGATYKSMFEFVGSTVESLNMEXRMTLCNMVIEAGGKNGVV
SSEQ ID NO: 42 .....
SSEQ ID NO: 44 .....
181
240

```

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***+*****++ * ****+ ++ **+++++++**
SEQ ID NO: 45 EPDEKTIQYVKEAMKKHGTERPFEVIKGDEDAEFAEVYEIEADKIEPVFACPHNVVDNVKQ
SEQ ID NO: 36 PADETTFKYLEGR....TSVDYQPVYSDAEARFFSDYRFDVSKLEPVVAKPHSPDNRAL
SEQ ID NO: 38 PADETTFKYLEGK....TSVDYEPVYSDAQARFFSDYRFDVSKLEPVVAKPHSPDNRAP
SEQ ID NO: 40 .....LEGG.....
SEQ ID NO: 42 .....TSLPYEPVYSDDQARFLAEYRFDVSKLEPVVAKPHSPDNRAL
SEQ ID NO: 44 .....

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[illegible]

உயிர்

[illegible]

SEQ ID NO: 54	+ MEKFTIYKGTSVP.....*
SEQ ID NO: 47	M..AAALSGTAVS.....TAALLAPIRAPTSAFIRRSQLTCHRL.....HSLKCRR
SEQ ID NO: 49	M..AAAAAAPALS LAE.AAPVTAVLAPCPTPSRTERRRSWVA AICR.....PALCKHH
SEQ ID NO: 51	MRKXTEVREEALSIQQWPCTRFSSAATVLP RNLAFTKL SLSSHSTLLPRELSEFTEPKSSN
SEQ ID NO: 53ARAAVS.....TAALLAPIRAPTSAFIRRSQLTCHRL.....HSLKCRR
	1
	60

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SEQ ID NO:54
.....VMNDNIDTDQIIPKQFLKAIDKK..GFGK
SEQ ID NO:47 A...GSIVPAAAAAAGSSPSSAVFHGECFVVDNIDTDQIIPAEHLTLVPSKPDEYRK
SEQ ID NO:49 SRPLTAVVAAAAAAGDSTAGVFHGECEVVDNIDTDQIIPAEHLTLVPSKPDEYRK
SEQ ID NO:51 PRNRVAVSLQTPRAQSAASAPSAFHLCLCYVVDNIDTDQIIPAEYLTLVPSKPDEYEK
SEQ ID NO:53 A...GSIVPAAAAAAGSSPSSAVFHGECFVVDNIDTDQIIPAEHLTLVPSKPDEYRK
61 120

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SSEQ	ID NO: 54	NLFYEWRYLKDYDENPDFILNAPKYKKASLLISGDNFGSSREHAAWALSDYGFRAlIA
SSEQ	ID NO: 47	LGSFAFAGLPSAAYPTPFVAPGEESSRYAIIVGGANFGCGSSREHAPVALGAAGAARAlVA
SSEQ	ID NO: 49	LGSFAFVGLPTAAAYPTPFVAPGEETTRYAVIIGGANFGCGSSREHAPVALGAAGAARAlVA
SSEQ	ID NO: 51	LGSYALIGLP .ATYATRFIEPGEIKTKYAIVIGGANFGCGSSREHAPVALGASGAAAlVA
SSEQ	ID NO: 53	LGSFAFAGLPSAAYPTPFVAPGEESSRYAIIVGGANFGCGSSREHAPVALGAAGAARAlVA

121
180

FIG. 7A

